

Chapter 15.01 STORM-WATER MANAGEMENT

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15.01.010 Purpose.

The provisions of this chapter are intended to guide and advise all who conduct new development or redevelopment within the city of Monroe. The provisions of this chapter establish the minimum level of compliance which must be met to permit a property to be developed or redeveloped within the city of Monroe. It is the purpose of this chapter to:

- A. Minimize water quality degradation and sedimentation in streams, ponds, lakes, wetlands and other water bodies;
- B. Minimize the impact of increased runoff, erosion and sedimentation caused by land development and maintenance practices;
- C. Maintain and protect groundwater resources;
- D. Minimize adverse impacts of alterations on ground and surface water quantities, locations and flow patterns;
- E. Decrease potential landslide, flood and erosion damage to public and private property;
- F. Promote site planning and construction practices that are consistent with natural topographical, vegetational and hydrological conditions;
- G. Maintain and protect the storm water management infrastructure within the city of Monroe and downstream;
- H. Provide a means of regulating clearing and grading of private and public land while minimizing water quality impacts in order to protect public health and safety; and
- I. Provide minimum development regulations and construction procedures which will preserve, replace or enhance, to the maximum extent practicable, existing vegetation to preserve and enhance the natural qualities of lands, wetlands and water bodies. ~~(Ord. 1032, 1994)~~

15.01.015 Exemptions.

Forest practices:

Forest practices regulated under Title 222 WAC, except for Class IV General forest practices that are conversions from timber land to other uses, are exempt from the provisions of the minimum requirements.

Commercial agriculture:

Commercial agriculture practices involving working the land for production are generally exempt. However, the conversion from timberland to agriculture, and the construction of impervious surfaces are not exempt.

Oil and Gas Field Activities or Operations:

Construction of drilling sites, waste management pits, and access roads, as well as construction of transportation and treatment infrastructure such as pipelines natural gas treatment plants, natural gas pipeline compressor stations, and crude oil pumping stations are exempt. Operators are encouraged to implement and maintain Best Management Practices to minimize erosion and control sediment during and after construction activities to help ensure protection of surface water quality during storm events.

Road Maintenance:

The following road maintenance practices are exempt: pothole and square cut patching, overlaying existing asphalt or concrete pavement with asphalt or concrete without expanding the area of coverage, shoulder grading, reshaping/regrading drainage systems, crack sealing, resurfacing with in-kind material without expanding the road prism, and vegetation maintenance.

The following road maintenance practices are considered redevelopment, and therefore are not categorically exempt. The extent to which this Chapter applies is explained for each circumstance.

- Removing and replacing a paved surface to base course or lower, or repairing the roadway base: If impervious surfaces are not expanded, Minimum Requirements #1 - #5 apply. However, in most cases, only Minimum Requirement #2, Construction Stormwater Pollution Prevention, will be germane. Where appropriate, project proponents are encouraged to look for opportunities to use permeable and porous pavements.
- Extending the pavement edge without increasing the size of the road prism, or paving graveled shoulders: These are considered new impervious surfaces and are subject to the minimum requirements that are triggered when the thresholds identified for redevelopment projects are met.
- Resurfacing by upgrading from dirt to gravel, asphalt, or concrete; upgrading from gravel to asphalt, or concrete; or upgrading from a bituminous surface treatment ("chip seal") to asphalt or concrete: These are considered new impervious surfaces and are subject to the minimum requirements that are triggered when the thresholds identified for redevelopment projects are met.

Underground utility projects:

Underground utility projects that replace the ground surface with in-kind material or materials with similar runoff characteristics are only subject to Minimum Requirement #2, Construction Stormwater Pollution Prevention.

All other new development is subject to one or more of the Minimum Requirements (see Section 15.01.040).

15.01.020 Definitions.

For the purpose of this chapter, the following definitions shall apply:

"American Public Works Association" or "APWA" means the adopted edition of the Washington State Chapter of the American Public Works Association.

"Approval" means the proposed work or completed work conforms to this chapter in the opinion of the administrator.

Arterial - A road or street primarily for through traffic. A major arterial connects an Interstate Highway to cities and counties. A minor arterial connects major arterials to collectors. A collector connects an arterial

to a neighborhood. A collector is not an arterial. A local access road connects individual homes to a collector.

“As graded” means the extent of surface conditions on completion of grading.

“Basin plan” means a plan and all implementing regulations and procedures including but not limited to land use management adopted by ordinance for managing surface and storm water management facilities and features within individual sub-basins.

“Bedrock” means the more or less solid rock in place either on or beneath the surface of the earth. It may be soft, medium, or hard and have a smooth or irregular surface.

“Bench” means a relatively level step excavated into earth material on which fill is to be placed.

“Best management practice” or “BMP” means physical, structural, and/or managerial practices that, when used singly or in combination, prevent or reduce pollution of water. BMPs are listed and described in the manual.

Certified Erosion and Sediment Control Lead (CESCL) - means an individual who has current certification through an approved erosion and sediment control training program that meets the minimum training standards established by the Department (see BMP C160 in the Stormwater Management Manual for Western Washington (2005)). A CESCL is knowledgeable in the principles and practices of erosion and sediment control. The CESCL must have the skills to assess site conditions and construction activities that could impact the quality of stormwater and, the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges. Certification is obtained through an Ecology approved erosion and sediment control course. Course listing are provided online at Ecology's web site.

“Civil engineer” means a professional engineer licensed in the state of Washington in civil engineering who is experienced and knowledgeable in the practice of soils engineering.

“Civil engineering” means the application of the knowledge of the forces of nature, principles of mechanics and the properties of materials to the evaluation, design and construction of civil works for the beneficial uses of mankind.

“Clearing” means the destruction and removal of vegetation by manual, mechanical, or chemical methods.

“Commercial agriculture” means those activities conducted on lands defined in RCW 84.34.020(2), and activities involved in the production of crops or livestock for wholesale trade. An activity ceases to be considered commercial agriculture when the area on which it is conducted is proposed for conversion to a nonagricultural use or has lain idle for more than five years, unless the idle land is registered in a federal or state soils conservation program, or unless the activity is maintenance of irrigation ditches, laterals, canals, or drainage ditches related to an existing and ongoing agricultural activity.

“Compaction” means densification of a fill by mechanical means.

“Critical areas” means, at a minimum, areas which include wetlands, areas with a critical recharging effect on aquifers used for potable water, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, including unstable slopes, and associated areas and ecosystems.

“Design storm” means a prescribed hyetograph and total precipitation amount (for a specific duration recurrence frequency) used to estimate runoff for a hypothetical storm of interest or concern for the purposes of analyzing existing drainage, designing new drainage facilities or assessing other impacts of a proposed project on the flow of surface water. (A hyetograph is a graph of percentages of total precipitation for a series of time steps representing the total time during which the precipitation occurs.)

“Detention” means the release of storm water runoff from the site at a slower rate than it is collected by the storm water facility system, the difference being held in temporary storage.

“Detention facility” means an above or below ground facility, such as a pond or tank, that temporarily stores storm water runoff and subsequently releases it at a slower rate than it is collected by the drainage facility system. There is little or no infiltration of stored storm water.

“Drainage basin” means a geographic and hydrologic subunit of a watershed.

“Earth material” means any rock, natural soil or fill and/or any combination thereof.

“Ecology” means the Washington State Department of Ecology.

Effective Impervious surface - Those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces on residential development sites are considered ineffective if the runoff is dispersed through at least one hundred feet of native vegetation in accordance with BMP T5.30 – “Full Dispersion,” as described in Chapter 5 of Volume V of the Stormwater Management Manual for Western Washington (2005)

“Engineering geologist” means a geologist experienced and knowledgeable in engineering geology.

“Engineering geology” means the application of geologic knowledge and principles in the investigation and evaluation of naturally occurring rock and soil for use in the design of civil works.

“Erosion” means the wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep, detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

“Excavation” means the mechanical removal of earth material.

“Existing site conditions” means:

1. For developed sites with storm water facilities that have been constructed to meet the standards in the minimum requirements of this manual, existing site conditions shall mean the existing conditions on the site.
2. For developed sites that do not have storm water facilities that meet the minimum requirements, existing site conditions shall mean the conditions that existed prior to local government adoption of a storm water management program. If in question, the existing site conditions shall be documented by aerial photograph records or other appropriate means.
3. For all sites in water quality sensitive areas as identified under Minimum Requirement No. 7, Water Quality Sensitive Areas, MMC [15.01.070\(B\)\(10\)](#), existing site conditions shall mean undisturbed forest, for the purpose of calculating runoff characteristics.
4. For all undeveloped sites outside of water quality sensitive areas, existing site conditions shall mean the existing conditions on the site.

“Experimental BMP” means a BMP that has not been tested and evaluated by the Department of Ecology in collaboration with local governments and technical experts.

“Fill” means a deposit of earth material placed by artificial means.

“Forest practice” means any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber, including but not limited to:

1. Road and trail construction.
2. Harvesting, final and intermediate.
3. Precommercial thinning.
4. Reforestation.
5. Fertilization.
6. Prevention and suppression of diseases and insects.
7. Salvage of trees.
8. Brush control.

“Frequently flooded areas” means the one-hundred-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

“Geologically hazardous areas” means areas that, because of their susceptibility to erosion, sliding, earthquake or other geological events, are not suited to the siting of commercial, residential or industrial development consistent with public health or safety concerns.

“Grade” means the slope of a road, channel, or natural ground and the finished surface of a canal bed, roadbed, top of embankment, bottom of excavation or any surface prepared for the support of construction such as paving or the laying of a conduit.

1. Existing Grade. The grade prior to grading.
2. Rough Grade. The stage at which the grade approximately conforms to the approved plan.
3. Finish Grade. The final grade of the site which conforms to the approved plan.

“Grade, (to)” means to finish the surface of a canal bed, roadbed, top of embankment or bottom of excavation.

“Gradient terrace” means an earth embankment or a ridge-and-channel constructed with suitable spacing and an acceptable grade to reduce erosion damage by intercepting surface runoff and conducting it to a stable outlet at a stable nonerosive velocity.

“Groundwater” means water in a saturated zone or stratum beneath the surface of land or a surface water body.

Highway – A main public road connecting towns and cities

“Hydro-period” means the seasonal occurrence of flooding and/or soil saturation; it encompasses depth, frequency, duration, and seasonal pattern of inundation.

“Illicit discharge” means all nonstorm water discharges to storm water drainage systems that cause or contribute to a violation of state water quality, sediment quality or groundwater quality standards, including but not limited to sanitary sewer connections, industrial process water, interior floor drains, car washing and gray water systems.

Impervious surface - A hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces for purposes of determining whether the thresholds for application of minimum requirements are exceeded. Open, uncovered retention/detention facilities shall be considered impervious surfaces for purposes of runoff modeling.

~~“Impervious surface” means a hard surface area which either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of storm water. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces.~~

“Interflow” means that portion of rainfall that infiltrates into the soil and moves laterally through the upper soil horizons until intercepted by a stream channel or until it returns to the surface, for example, in a wetland, spring or seep.

Land disturbing activity - Any activity that results in movement of earth, or a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and road construction shall also be considered a land disturbing activity. Vegetation maintenance practices are not considered land-disturbing activity. “Land-disturbing activity”

~~means any activity that results in a change in the existing soil cover (both vegetative and nonvegetative) and/or the existing soil topography. Land-disturbing activities include, but are not limited to, demolition, construction, clearing, grading, filling and excavation.~~

“Large parcel erosion and sediment control plan” or “large parcel ESC plan” means a plan to implement BMPs to control pollution generated during land disturbing activity. Guidance for preparing a large parcel ESC plan is contained in the manual. (Note: Ecology will add a sample large parcel ESC plan to this guidance manual.)

Maintenance - Repair and maintenance includes activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing and results in no significant adverse hydrologic impact. It includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctional facilities, including cases where environmental permits require replacing an existing structure with a different type structure, as long as the functioning characteristics of the original structure are not changed. One example is the replacement of a collapsed, fish blocking, round culvert with a new box culvert under the same span, or width, of roadway. See also Road Maintenance exemptions in Section 15.01.015.

“Mitigation” means, in the following order of preference:

1. Avoiding the impact altogether by not taking a certain action or part of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
5. Compensation for the impact by replacing, enhancing, or providing substitute resources or environments.

Native vegetation – Vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas Fir, western hemlock, western red cedar, alder, big-leaf maple, and vine maple; shrubs such as willow, elderberry, salmonberry, and salal; and herbaceous plants such as sword fern, foam flower, and fireweed.

“Natural location” means the location of those channels, swales, and other nonmanmade conveyance systems as defined by the first documented topographic contours existing for the subject property, either from maps or photographs, or such other means as appropriate.

New development - Land disturbing activities, including Class IV -general forest practices that are conversions from timber land to other uses; structural development, including construction or installation of a building or other structure; creation of impervious surfaces; and subdivision, short subdivision and binding site plans, as defined and applied in Chapter 58.17 RCW. Projects meeting the definition of redevelopment shall not be considered new development.

~~“New development” means the following activities: land disturbing activities, structural development, including construction, installation or expansion of a building or other structure; creation of impervious surfaces; Class IV, general forest practices that are conversions from timberland to other uses; and subdivision and short subdivision of land as defined in RCW 58.17.020. All other forest practices and commercial agriculture are not considered new development.~~

“Permanent storm water quality control (PSQC) plan” means a plan which includes permanent BMPs for the control of pollution from storm water runoff after construction and/or land disturbing activity has been completed. For small sites, this requirement is met by implementing a small parcel erosion and sediment control plan. Guidance on preparing a PSQC plan is contained in the manual. (Note: Ecology will add a sample large parcel ESC plan to this guidance manual.)

“Person” means any individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, agency of the state, or local government unit, however designated.

“Pollution” means contamination or other alteration of the physical, chemical, or biological properties of waters of the state, including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gaseous, solid, radioactive or other substance into any waters of the state as will be or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses, or to livestock, wild animals, birds, fish or other aquatic life.

Pollution-generating impervious surface (PGIS) - Those impervious surfaces considered to be a significant source of pollutants in stormwater runoff. Such surfaces include those which are subject to: vehicular use; industrial activities (as further defined in the glossary); or storage of erodible or leachable materials, wastes, or chemicals, and which receive direct rainfall or the runoff or blow-in of rainfall. Erodible or leachable materials, wastes, or chemicals are those substances which, when exposed to rainfall, measurably alter the physical or chemical characteristics of the rainfall runoff. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage. Metal roofs are also considered to be PGIS unless they are coated with an inert, non-leachable material (e.g., baked-on enamel coating).

A surface, whether paved or not, shall be considered subject to vehicular use if it is regularly used by motor vehicles. The following are considered regularly-used surfaces: roads, unvegetated road shoulders, bike lanes within the traveled lane of a roadway, driveways, parking lots, unfenced fire lanes, vehicular equipment storage yards, and airport runways.

The following are not considered regularly-used surfaces: paved bicycle pathways separated from and not subject to drainage from roads for motor vehicles, fenced fire lanes, and infrequently used maintenance access roads.

Pollution-generating pervious surfaces (PGPS) - Any non-impervious surface subject to use of pesticides and fertilizers or loss of soil. Typical PGPS include lawns, landscaped areas, golf courses, parks, cemeteries, and sports fields.

Pre-developed condition – The native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. The pre-developed condition shall be assumed to be a forested land cover unless reasonable, historic information is provided that indicates the site was prairie prior to settlement.

Project site - That portion of a property, properties, or right of way subject to land disturbing activities, new impervious surfaces, or replaced impervious surfaces.

Receiving waters - Bodies of water or surface water systems to which surface runoff is discharged via a point source of stormwater or via sheet flow.

Redevelopment - On a site that is already substantially developed (i.e., has 35% or more of existing impervious surface coverage), the creation or addition of impervious surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or other structure; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities.

“Redevelopment” means, on an already developed site, the creation or addition of impervious surfaces, structural development including construction, installation or expansion of a building or other structure, and/or replacement of impervious surface that is not part of a routine maintenance activity, and land disturbing activities associated with structural or impervious redevelopment.

“Regional retention/detention system” means a storm water quantity control structure designed to correct existing excess surface water runoff problems of a basin or sub-basin. The area downstream has been previously identified as having existing or predicted significant and regional flooding and/or erosion problems. This term is also used when a detention facility is used to detain storm water runoff from a number of different businesses, developments or areas within a catchment.

Replaced impervious surface - For structures, the removal and replacement of any exterior impervious surfaces or foundation. For other impervious surfaces, the removal down to bare soil or base course and replacement.

“Retention/detention facility (R/D)” means a type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration, and/or infiltration into the ground or to hold surface and storm water runoff for a short period of time and then release it to the surface and storm water management system.

Site – The area defined by the legal boundaries of a parcel or parcels of land that is (are) subject to new development or redevelopment. For road projects, the length of the project site and the right-of-way boundaries define the site. “Site” means the portion of a piece of property which is directly subject to development.

“Slope” means the degree of deviation of a surface from the horizontal measured as a numerical ratio, percent, or in degrees. Expressed as a ratio, the first number is the horizontal distance (run) and the second is the vertical distance (rise), as two-to-one. A two-to-one slope is a fifty percent slope. Expressed in degrees, the slope is the angle from the horizontal plane, with a ninety-degree slope being vertical (maximum) and a forty-five degree slope being a one-to-one or one hundred percent slope.

“Small parcel erosion and sediment control plan” or “small parcel ESC plan” means a plan for small sites to implement temporary BMPs to control pollution generated during the construction phase only, primarily erosion and sediment. Guidance for preparing a small parcel ESC plan is contained in the manual.

“Soil” means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of land plants.

Source control BMP - A structure or operation that is intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. This manual separates source control BMPs into two types. Structural Source Control BMPs are physical, structural, or mechanical devices, or facilities that are intended to prevent pollutants from entering stormwater. Operational BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater. See Volume IV of the Stormwater Management Manual for Western Washington(2005) for details. “Source control BMP” means a BMP that is intended to prevent pollutants from entering storm water. A few examples of source control BMPs are erosion control practices, maintenance of storm water facilities, constructing roofs over storage and working areas, and directing wash water and similar discharges to the sanitary sewer or a dead-end sump.

“Storm water” means that portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, channels or pipes into a defined surface water channel, or a constructed infiltration facility.

“Storm water drainage system” means constructed and natural features which function together as a system to collect, convey, channel, hold, inhibit, retain, detain, infiltrate, divert, treat or filter storm water.

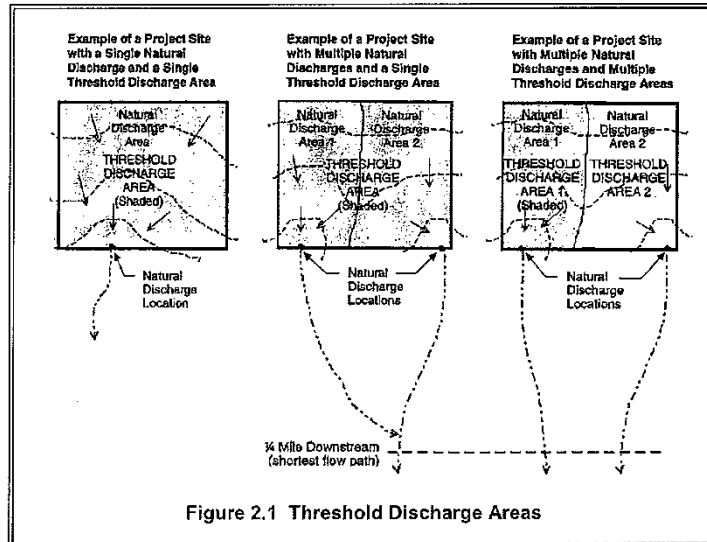
“Storm water facility” means a constructed component of a storm water drainage system, designed or constructed to perform a particular function, or multiple functions. Storm water facilities include, but are not limited to, pipes, swales, ditches, culverts, street gutters, detention basins, retention basins, constructed wetlands, infiltration devices, catch basins, oil/water separators, sediment basins and modular pavement.

“Storm water management manual” or “manual” means the manual adopted by reference and prepared by Ecology that contains BMPs to prevent or reduce pollution (or a technically equivalent manual approved by Ecology).

“Storm water site plan” means a plan which includes an erosion and sediment control (ESC) plan and/or a permanent storm water quality control (PSQC) plan. For small sites, this plan is the equivalent of a small parcel erosion and sediment control plan. Guidance on preparing a storm water site plan is contained in the manual.

Threshold Discharge Area - An onsite area draining to a single natural discharge location or multiple natural discharge locations that combine within one-quarter mile downstream (as determined by the shortest flowpath). The examples in Figure 2.1 below illustrate this definition.

The purpose of this definition is to clarify how the thresholds of this manual are applied to project sites with multiple discharge points.



“Toe of slope” means a point or line of slope in an excavation or cut where the lower surface changes to horizontal or meets the exiting ground slope.

“Top of slope” means a point or line on the upper surface of a slope where it changes to horizontal or meets the original surface.

“Treatment BMP” means a BMP that is intended to remove pollutants from storm water. A few examples of treatment BMPs are detention ponds, oil/water separators, biofiltration swales and constructed wetlands.

“Unstable slopes” means those sloping areas of land which have in the past exhibited, are currently exhibiting, or will likely in the future exhibit mass movement of earth.

“Vegetation” means all organic plant life growing on the surface of the earth.

“Water body” means surface waters including rivers, streams, lakes, marine waters, estuaries, and wetlands.

“Watershed” means a geographic region within which water drains into a particular river, stream, or body of water as identified and numbered by the State of Washington Water Resource Inventory Areas (WRIAs) as defined in Chapter 173-500 WAC.

Wetland - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. “Wetlands” means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that

~~under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. This includes wetlands created, restored or enhanced as part of a mitigation procedure. This does not include constructed wetlands or the following surface waters of the state intentionally constructed from sites that are not wetlands: irrigation and drainage ditches, grass-lined swales, canals, agricultural detention facilities, farm ponds, and landscape amenities. (Ord. 1032, 1994)~~

15.01.030 General provisions.

- ~~A. A.—Abrogation and Greater Restrictions. It is not intended that this chapter repeal, abrogate, or impair any existing regulations, easements, covenants, or deed restrictions. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail.~~
- ~~B. B.—Interpretation. The provisions of this chapter shall be held to be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this chapter. (Ord. 1032, 1994)~~

15.01.040 Applicability of the Minimum Requirements.

Thresholds

~~Not all of the Minimum Requirements apply to every development or redevelopment project. The applicability varies depending on the type and size of the project. This section identifies thresholds that determine the applicability of the Minimum Requirements to different projects. The flow charts in Figures 3.1, 3.2 and 3.3 must be used to determine which of the Minimum Requirements apply. The Minimum Requirements themselves are presented in Section 15.01.045. The thresholds below apply to new development, redevelopment, and construction site activities that result in land disturbance of equal or greater than one acre, including projects less than one acre that are part of a larger common plan of development or sale.~~

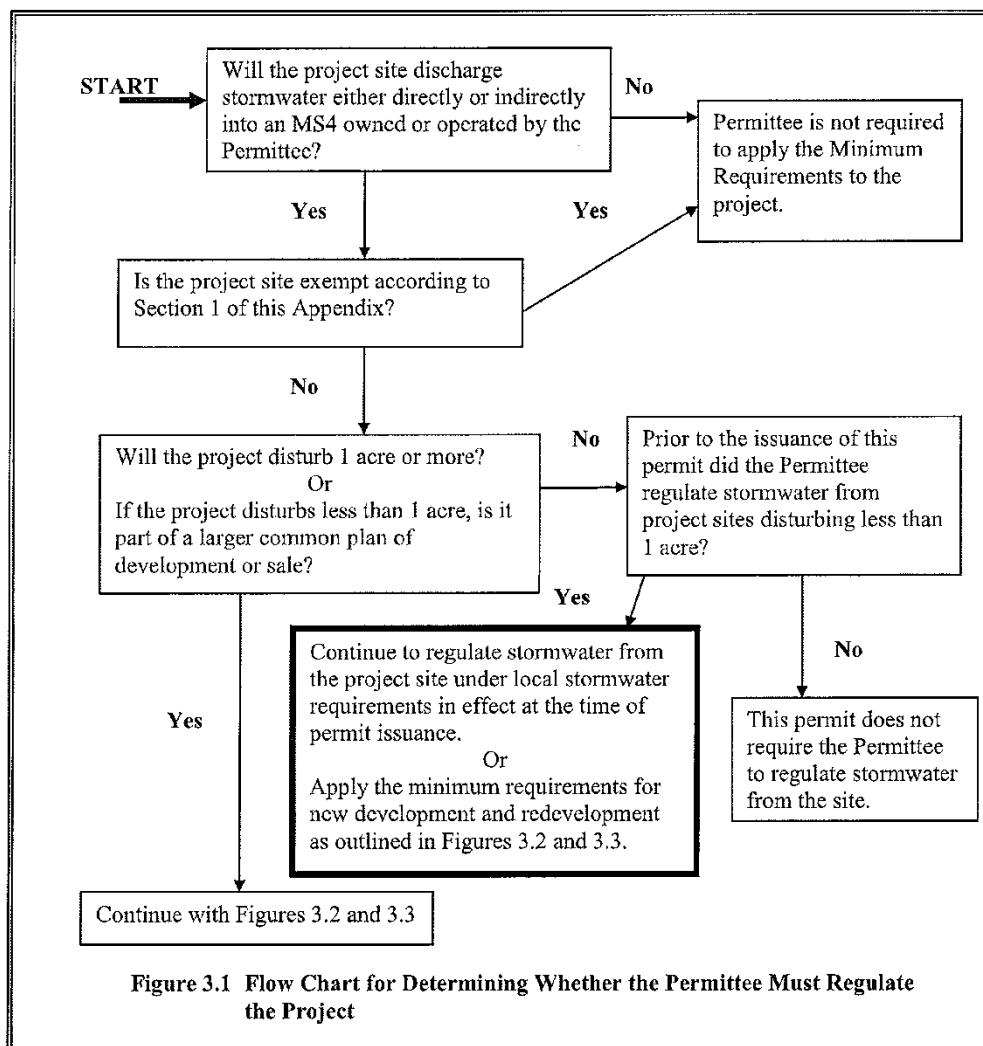
~~This threshold is defined as the “regulatory threshold”. If as described above, the project exceeds the one acre regulatory threshold, the technical thresholds contained in this section (Section 3) shall be to determine which of the minimum requirements must be applied to the project.~~

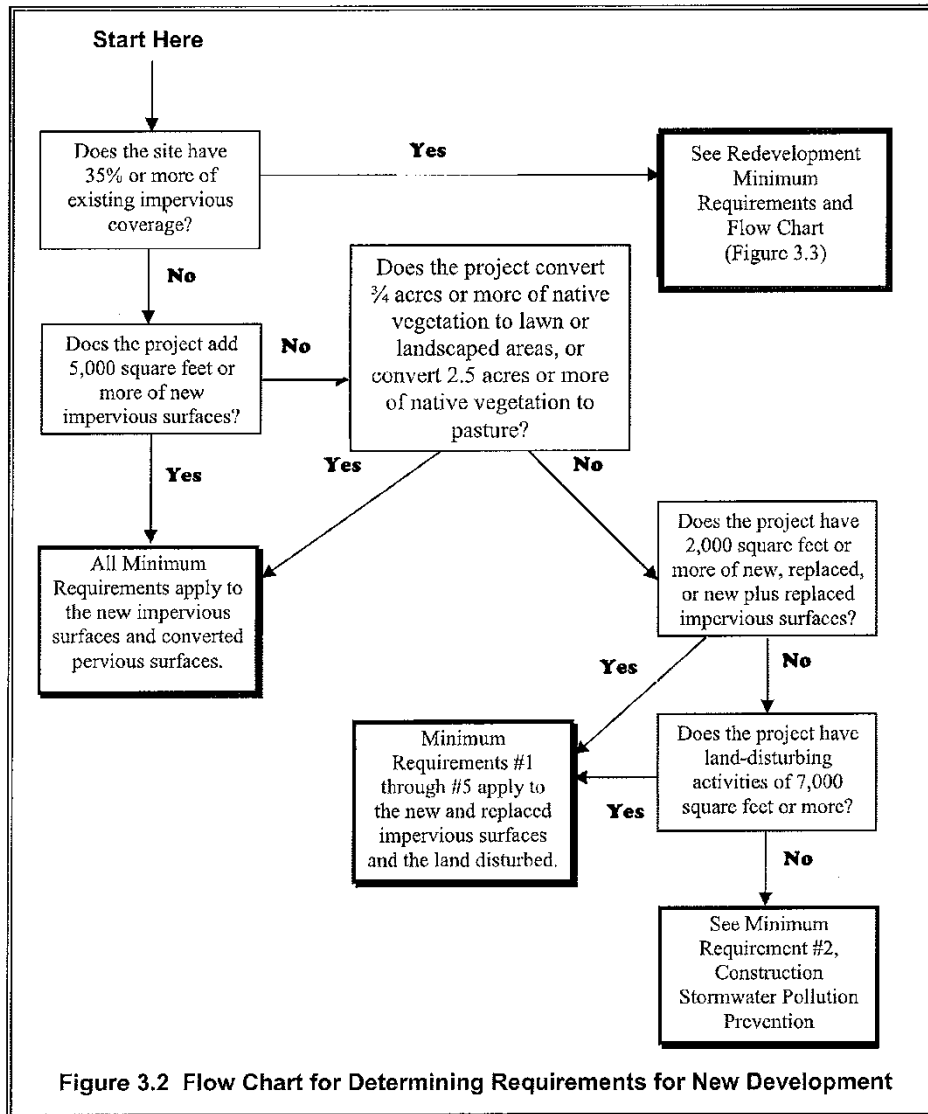
~~When any provision of any other chapter of this code conflicts with this chapter, that which provides more environmental protection shall apply unless specifically provided otherwise in this chapter.~~

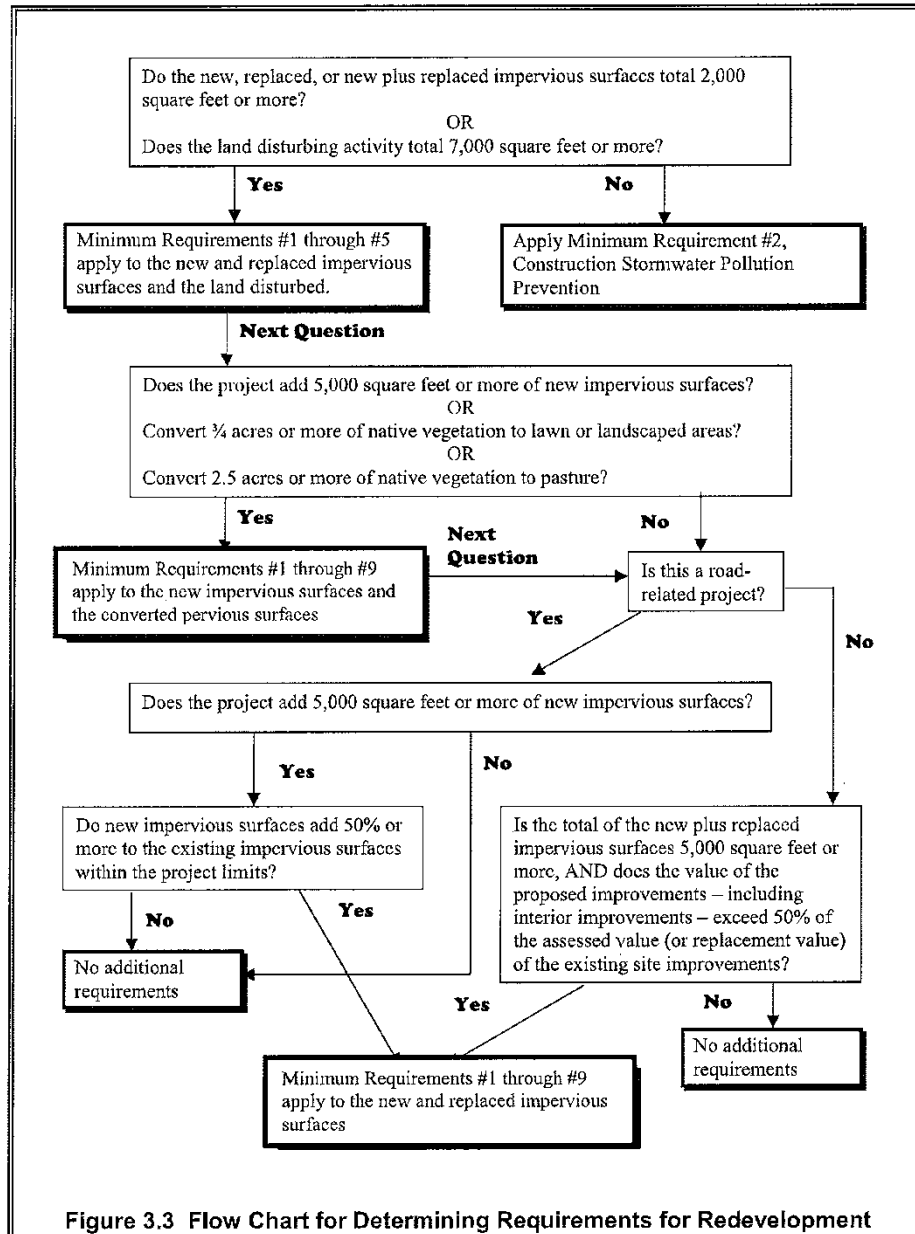
~~The city engineer is authorized to adopt written procedures for the purposes of carrying out the provisions of this chapter. Prior to fulfilling the requirements of this chapter, the city of Monroe shall not grant any approval or permission to conduct a regulated activity including but not limited to the following: building permit, commercial or residential; binding site plan; conditional use permit; franchise right-of-way construction permit; grading and clearing permit; master plan development; planned unit development; right-of-way permit; shoreline substantial development permit; shoreline variance; shoreline conditional use permit; shoreline environmental redesignation; special use permit; variance; zone reclassification; subdivision; short subdivision; special use permit; utility and other use permit; zone reclassification; or any subsequently adopted permit or required approval not expressly exempted by this chapter.~~

~~Regulated activities shall be conducted only after the city of Monroe approves a storm water site plan which includes one or more of the following as required by this chapter:~~

- ~~A.—Small parcel erosion and sediment control plan;~~
- ~~B.—Large parcel erosion and sediment control plan;~~
- ~~C.—Permanent storm water quality control (PSQC) plan.~~







(Ord. 1260, 2002; Ord. 1032, 1994)

15.01.050 Regulated activities and allowed activities.

A. Regulated Activities. Consistent with the minimum requirements contained in this chapter, the city of Monroe shall approve or disapprove the following activities, unless exempted in subsection ~~(B)~~ 15.01.015 of this chapter ~~section~~:

New Development

All new development shall be required to comply with Minimum Requirement #2.

The following new development shall comply with Minimum Requirements #1 through #5 for the new and replaced impervious surfaces and the land disturbed:

- Creates or adds 2,000 square feet, or greater, of new, replaced, or new plus replaced impervious surface area, or
- Has land disturbing activity of 7,000 square feet or greater.

The following new development shall comply with Minimum Requirements #1 through #9 for the new impervious surfaces and the converted pervious surfaces:

- Creates or adds 5,000 square feet, or more, of new impervious surface area, or
- Converts ¾ acres, or more, of native vegetation to lawn or landscaped areas, or

Converts 2.5 acres, or more, of native vegetation to pasture.~~1.—New Development.~~

- a. ~~Land-disturbing activities;~~
- b. ~~Structural development, including construction, installation or expansion of a building or other structure;~~
- c. ~~Creation of impervious surfaces;~~
- d. ~~Class IV general forest practices that are conversions from timberland to other uses;~~
- e. ~~Subdivision, short subdivision and binding site plans, as defined in RCW 58.17.020.~~

- 2.

Redevelopment

All redevelopment shall be required to comply with Minimum Requirement #2. In addition, all redevelopment that exceeds certain thresholds shall be required to comply with additional Minimum Requirements as follows.

The following redevelopment shall comply with Minimum Requirements #1 through #5 for the new and replaced impervious surfaces and the land disturbed:

- The new, replaced, or total of new plus replaced impervious surfaces is 2,000 square feet or more, or
- 7,000 square feet or more of land disturbing activities.

The following redevelopment shall comply with Minimum Requirements #1 through #9 for the new impervious surfaces and converted pervious areas:

- Adds 5,000 square feet or more of new impervious surfaces or,
- Converts ¾ acres, or more, of native vegetation to lawn or landscaped areas, or
- Converts 2.5 acres, or more, of native vegetation to pasture.

If the runoff from the new impervious surfaces and converted pervious surfaces is not separated from runoff from other surfaces on the project site, the stormwater treatment facilities must be sized for the entire flow that is directed to them.

The Minimum Requirements are allowed to be met for an equivalent (flow and pollution characteristics) area within the same site. For public roads' projects, the equivalent area does not have to be within the project limits, but must drain to the same receiving water.

Additional Requirements for Re-development Project Sites

For road-related projects, runoff from the replaced and new impervious surfaces (including pavement, shoulders, curbs, and sidewalks) shall meet all the Minimum Requirements if the new impervious surfaces total 5,000 square feet or more and total 50% or more of the existing impervious surfaces within the project limits. The project limits shall be defined by the length of the project and the width of the right-of-way.

Other types of redevelopment projects shall comply with all the Minimum Requirements for the new and replaced impervious surfaces if the total of new plus replaced impervious surfaces is 5,000 square feet or more, and the valuation of proposed improvements –including interior improvements – exceeds 50% of the assessed value of the existing site improvements.

A variance/exception to the application of the flow control requirements to replaced impervious surfaces may be granted if such application imposes a severe economic hardship. See Section 15.01.75.

Modification of the Minimum Requirements

Basin Planning is encouraged and may be used to tailor Minimum Requirement #6 Runoff Treatment, Minimum Requirement #7 Flow Control, and/or Minimum Requirement #8 Wetlands Protection. Basin planning may be used to support alternative treatment, flow control, and/or wetland protection requirements to those contained in Section 15.01.045. Basin planning may also be used to demonstrate an equivalent level of treatment, flow control, and/or wetland protection through the construction and use of regional stormwater facilities. See Section 15.01.077 for details on Basin Planning and how basin planning may be used to modify the Minimum Requirements in Section 15.01.045.

~~—Redevelopment. On an already developed site, the creation or addition of impervious surfaces, structural development including construction, installation or expansion of a building or other structure, land-disturbing activity, and/or replacement of impervious surface that is not part of a routine maintenance activity and land-disturbing activities associated with structural or impervious redevelopment.~~

~~B.—Exemptions. Commercial agriculture and forest practices regulated under WAC Title 222, except for Class IV general forest practices that are conversions from timberland to other uses, are exempt from the provisions of this chapter.~~

Development undertaken by the Washington State Department of Transportation in state highway rights-of-way is regulated by Chapter 173-270 WAC, the Puget Sound Highway Runoff Program.

~~All other new development and redevelopment is subject to the minimum requirements of this chapter. (Ord. 1032, 1994)~~

~~15.01.060 General requirements.~~

~~A.—Storm Water Management Manual Adopted. The latest edition of Ecology's storm water management manual is hereby adopted by reference and is hereinafter referred to as the manual.~~

~~B.—Storm Water Best Management Practices (BMPs).~~

~~1.—General. BMPs shall be used to control pollution from storm water. BMPs shall be used to comply with the standards in this chapter. BMPs are in the manual.~~

~~2.—Experimental BMPs. In those instances where appropriate BMPs are not in the manual, experimental BMPs should be considered. Experimental BMPs are encouraged as a means of solving problems in a manner not addressed by the manual in an effort to improve storm water quality technology. Experimental BMPs must be approved in accordance with the approval process outlined in the manual.~~

C.—Illicit Discharges. Illicit discharges to storm water drainage systems are prohibited. (Ord. 1032, 1994)Minimum Requirements

This Section describes the Minimum Requirements for stormwater management at development and redevelopment sites. Section 15.01.040 should be consulted to determine which of the minimum requirements below apply to any given project. Figures 3.2 and 3.3 should be consulted to determine whether the minimum requirements apply to new surfaces, replaced surfaces or new and replaced surfaces.

Minimum Requirement #1: Preparation of Stormwater Site Plans

All projects meeting the thresholds in Section 15.01.040 shall submit for approval a Stormwater Site Plan prepared in accordance with Chapter 3 of Volume 1 of the Stormwater Management Manual for Western Washington (2005).

Minimum Requirement #2: Construction Stormwater Pollution Prevention Plan (SWPPP)

This Minimum Requirement may be achieved for an individual site if the site is covered under Ecology's General NPDES Permit for Stormwater Discharges Associated with Construction Activities and fully implementing the requirements of that permit.

Site operators may apply an “Erosivity Waiver” to projects disturbing less than five acres that meet the requirements of Section 15.01.055; such projects are exempt from the requirement to submit construction phase stormwater pollution prevention plans.

General Requirements

All new development and redevelopment projects are responsible for preventing erosion and discharge of sediment and other pollutants into receiving waters. Applicants must submit for approval a Construction Stormwater Pollution Prevention Plan (SWPPP) as part of the Stormwater Site Plan (see Minimum Requirement #1 above) for all projects which meet the thresholds in Section 15.01.040. The SWPPP shall be implemented beginning with initial soil disturbance and until final stabilization.

Sediment and Erosion control BMPs shall be consistent with the BMPs contained in chapters 3 and 4 of Volume II of the Stormwater Management Manual for Western Washington (2005).

The SWPPP shall include a narrative and drawings. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project. Clearing and grading activities for developments shall be permitted only if conducted pursuant to an approved site development plan (e.g., subdivision approval) that establishes permitted areas of clearing, grading, cutting, and filling. When establishing these permitted clearing and grading areas, consideration should be given to minimizing removal of existing trees and minimizing disturbance/compaction of native soils except as needed for building purposes. These permitted clearing and grading areas and any other areas required to preserve critical or sensitive areas, buffers, native growth protection easements, or tree retention areas as may be required by local jurisdictions, shall be delineated on the site plans and the development site.

Seasonal Work Limitations - From October 1 through April 30, clearing, grading, and other soil disturbing activities may only be authorized if silt-laden runoff will be prevented from leaving the site through a combination of the following:

1. Site conditions including existing vegetative coverage, slope, soil type and proximity to receiving waters; and
2. Limitations on activities and the extent of disturbed areas; and
3. Proposed erosion and sediment control measures.

The following activities are exempt from the seasonal clearing and grading limitations:

1. Routine maintenance and necessary repair of erosion and sediment control BMPs,
2. Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil, and
3. Activities where there is one hundred percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

Minimum Requirement #3: Source Control of Pollution

All known, available and reasonable source control BMPs must be required for all projects approved by the City of Monroe. Source control BMPs must be selected, designed, and maintained in accordance with Volume IV of the Stormwater Management Manual for Western Washington (2005) or an approved equivalent manual approved by the Department.

Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls

Natural drainage patterns shall be maintained, and discharges from the project site shall occur at the natural location, to the maximum extent practicable. The manner by which runoff is discharged from the project site must not cause a significant adverse impact to downstream receiving waters and down gradient properties. All outfalls require energy dissipation.

Minimum Requirement #5: On-site Stormwater Management

On-site Stormwater Management BMPs must infiltrate, disperse, and retain stormwater runoff onsite to the maximum extent feasible without causing flooding or erosion impacts. Roof Downspout Control BMPs, functionally equivalent to those described in Chapter 3 of Volume III of the Stormwater Management Manual for Western Washington (2005), and Dispersion and Soil Quality BMPs, functionally

equivalent to those in Chapter 5 of Volume V, of the Stormwater Management Manual for Western Washington (2005) shall be required to reduce the hydrologic disruption of developed sites.

Minimum Requirement #6: Runoff Treatment

Project Thresholds

The following require construction of stormwater treatment facilities (see Table 4.1 below):

- Projects in which the total of effective, pollution-generating impervious surface (PGIS) is 5,000 square feet or more in a threshold discharge area of the project, or
- Projects in which the total of pollution-generating pervious surfaces (PGPS) is three-quarters (3/4) of an acre or more in a threshold discharge area, and from which there is a surface discharge in a natural or man-made conveyance system from the site.

Table 4.1 Treatment Requirements by Threshold Discharge Area				
	< ¼ acres of PGPS	≥ ¼ acres PGPS	< 5,000 sf PGIS	≥ 5,000 sf PGIS
Treatment Facilities		✓		✓
Onsite Stormwater BMPs	✓	✓	✓	✓

PGPS = pollution-generating pervious surfaces

PGIS = pollution-generating impervious surfaces

sf = square feet

Treatment-Type Thresholds

1. Oil Control:

Treatment to achieve Oil Control applies to projects that have “high-use sites.” High-use sites are those that typically generate high concentrations of oil due to high traffic turnover or the frequent transfer of oil. High-use sites include:

- a. An area of a commercial or industrial site subject to an expected average daily traffic (ADT) count equal to or greater than 100 vehicles per 1,000 square feet of gross building area;
- b. An area of a commercial or industrial site subject to petroleum storage and transfer in excess of 1,500 gallons per year, not including routinely delivered heating oil;
- c. An area of a commercial or industrial site subject to parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.);
- d. A road intersection with a measured ADT count of 25,000 vehicles or more on the main roadway and 15,000 vehicles or more on any intersecting roadway, excluding projects proposing primarily pedestrian or bicycle use improvements.

2. Phosphorus Treatment:

The requirement to provide phosphorous control is determined by the local government with jurisdiction (e.g., through a lake management plan), or the Department of Ecology (e.g. through a waste load allocation). The local government may have developed a management plan and implementing ordinances or regulations for control of phosphorus from new/redevelopment for the receiving water(s) of the stormwater drainage. The local government can use the following sources of information for pursuing plans and implementing ordinances and/or regulations:

- a. Those waterbodies reported under section 305(b) of the Clean Water Act, and designated as not supporting beneficial uses due to phosphorous;
- b. Those listed in Washington State's Nonpoint Source Assessment required under section 319(a) of the Clean Water Act due to nutrients.

3. Enhanced Treatment:

Enhanced treatment for reduction in dissolved metals is required for the following project sites that discharge to fish-bearing streams, lakes, or to waters or conveyance systems tributary to fish-bearing streams or lakes:

Industrial project sites,
Commercial project sites,
Multi-family project sites, and
High AADT roads as follows:

- Fully controlled and partially controlled limited access highways with Annual Average Daily Traffic (AADT) counts of 15,000 or more
- All other roads with an AADT of 7,500 or greater

However, such sites listed above that discharge directly (or, indirectly through a municipal storm sewer system) to Basic Treatment Receiving Waters (Appendix IC of the Stormwater Management Manual for Western Washington (2005)), and areas of the above-listed project sites that are identified as subject to Basic Treatment requirements, are also not subject to Enhanced Treatment requirements. For developments with a mix of land use types, the Enhanced Treatment requirement shall apply when the runoff from the areas subject to the Enhanced Treatment requirement comprise 50% or more of the total runoff within a threshold discharge area.

4. Basic Treatment:

Basic Treatment generally applies to:

- a. Project sites that discharge to the ground, UNLESS:
 - i. The soil suitability criteria for infiltration treatment are met; (see Chapter 3 of Volume III of the Stormwater Management Manual for Western Washington (2005) for soil suitability criteria) or
 - ii. The project uses infiltration strictly for flow control – not treatment -and the discharge is within ¼-mile of a phosphorus sensitive lake (use a Phosphorus Treatment facility), or within ¼ mile of a fish-bearing stream, or a lake (use an Enhanced Treatment facility).
- b. Residential projects not otherwise needing phosphorus control as designated by USEPA, the Department of Ecology, or by the City of Monroe; and
- c. Project sites discharging directly to salt waters, river segments, and lakes listed in Appendix I-C of the Stormwater Management Manual for Western Washington (2005); and
- d. Project sites that drain to streams that are not fish-bearing, or to waters not tributary to fish-bearing streams;
- e. Landscaped areas of industrial, commercial, and multi-family project sites, and parking lots of industrial and commercial project sites that do not involve pollution-generating sources (e.g., industrial activities, customer parking, storage of erodible or leachable material, wastes or chemicals) other than parking of employees' private vehicles. For developments with a mix of land use types, the Basic Treatment requirement shall apply when the runoff from the areas subject to the Basic Treatment requirement comprise 50% or more of the total runoff within a threshold discharge area.

Treatment Facility Sizing

Water Quality Design Storm Volume: The volume of runoff predicted from a 24-hour storm with a 6-month return frequency (a.k.a., 6-month, 24-hour storm). Wetpool facilities are sized based upon the volume of runoff predicted through use of the Natural Resource Conservation Service curve number equations in Chapter 2 of Volume III of the Stormwater Management Manual for Western Washington (2005), for the 6-month, 24-hour storm. Alternatively, the 91st percentile, 24-hour runoff volume indicated by an approved continuous runoff model may be used.

Water Quality Design Flow Rate

1. Preceding Detention Facilities or when Detention Facilities are not required:

The flow rate at or below which 91% of the runoff volume, as estimated by an approved continuous runoff model, will be treated. Design criteria for treatment facilities are assigned to

achieve the applicable performance goal at the water quality design flow rate (e.g., 80% TSS removal).

2. Downstream of Detention Facilities:

The water quality design flow rate must be the full 2-year release rate from the detention facility. Alternative methods may be used if they identify volumes and flow rates that are at least equivalent.

That portion of any development project in which the above PGIS or PGPS thresholds are not exceeded in a threshold discharge area shall apply On-site Stormwater Management BMPs in accordance with Minimum Requirement #5.

Treatment Facility Selection, Design, and Maintenance

Stormwater treatment facilities shall be:

- Selected in accordance with the process identified in Chapter 4 of Volume I of the Stormwater Management Manual for Western Washington (2005).
- Designed in accordance with the design criteria in Volume V of the Stormwater Management Manual for Western Washington (2005), and
- Maintained in accordance with the maintenance schedule in Volume V of the Stormwater Management Manual for Western Washington (2005).

Additional Requirements

The discharge of untreated stormwater from pollution-generating impervious surfaces to ground water is not permitted, except for the discharge achieved by infiltration or dispersion of runoff from residential sites through use of On-site Stormwater Management BMPs.

Minimum Requirement #7: Flow Control

Applicability

Except as provided below, all projects must provide flow control to reduce the impacts of stormwater runoff from impervious surfaces and land cover conversions. The requirement below applies to projects that discharge stormwater directly, or indirectly through a conveyance system, into a fresh water.

Flow control is not required for projects that discharge directly to, or indirectly through an MS4 to a water listed in Appendix I-E of the Stormwater Management Manual for Western Washington (2005) subject to the following restrictions:

- Direct discharge to the exempt receiving water does not result in the diversion of drainage from any perennial stream classified as Types 1, 2, 3, or 4 in the State of Washington Interim Water Typing System, or Types "S", "F", or "Np" in the Permanent Water Typing System, or from any category I, II, or III wetland; and
- Flow splitting devices or drainage BMP's are applied to route natural runoff volumes from the project site to any downstream Type 5 stream or category IV wetland:
 - Design of flow splitting devices or drainage BMP's will be based on continuous hydrologic modeling analysis. The design will assure that flows delivered to Type 5 stream reaches will approximate, but in no case exceed, durations ranging from 50% of the 2-year to the 50-year peak flow.
 - Flow splitting devices or drainage BMP's that deliver flow to category IV wetlands will also be designed using continuous hydrologic modeling to preserve pre-project wetland hydrologic conditions unless specifically waived or exempted by regulatory agencies with permitting jurisdiction; and
- The project site must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g., pipes, ditches, outfall protection, etc.) and extends to the ordinary high water line of the exempt receiving water; and
- The conveyance system between the project site and the exempt receiving water shall have sufficient hydraulic capacity to convey discharges from future build-out conditions (under current zoning) of the site, and the existing condition from nonproject areas from which runoff is or will be collected; and
- Any erodible elements of the manmade conveyance system must be adequately stabilized to prevent erosion under the conditions noted above.

If the discharge is to a stream that leads to a wetland, or to a wetland that has an outflow to a stream, both this minimum requirement (Minimum Requirement #7) and Minimum Requirement #8 apply.

Thresholds

The following require construction of flow control facilities and/or land use management BMPs that will achieve the standard flow control requirement for western Washington (see Table 4.2):

- Projects in which the total of effective impervious surfaces is 10,000 square feet or more in a threshold discharge area, or
- Projects that convert $\frac{3}{4}$ acres or more of native vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture in a threshold discharge area, and from which there is a surface discharge in a natural or man-made conveyance system from the site, or
- Projects that through a combination of effective impervious surfaces and converted pervious surfaces cause a 0.1 cubic feet per second increase in the 100-year flow frequency from a threshold discharge area as estimated using the Western Washington Hydrology Model or other approved model.

That portion of any development project in which the above thresholds are not exceeded in a threshold discharge area shall apply Onsite Stormwater Management BMPs in accordance with Minimum Requirement #5.

Table 4.2 Flow Control Requirements by Threshold Discharge Area		
	Flow Control Facilities	On-site Stormwater Management BMPs
< $\frac{3}{4}$ acres conversion to lawn/landscape, or < 2.5 acres to pasture		✓
≥ $\frac{3}{4}$ acres conversion to lawn/landscape, or ≥ 2.5 acres to pasture	✓	✓
< 10,000 square feet of effective impervious area		✓
≥ 10,000 square feet of effective impervious area	✓	✓
≥ 0.1 cubic feet per second increase in the 100-year flood frequency	✓	✓

Standard Flow Control Requirement

Stormwater discharges shall match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow. The pre-developed condition to be matched shall be a forested land cover unless:

- Reasonable, historic information is available that indicates the site was prairie prior to settlement (modeled as "pasture" in the Western Washington Hydrology Model); or
- The drainage area of the immediate stream and all subsequent downstream basins have had at least 40% total impervious area since 1985. In this case, the predeveloped condition to be matched shall be the existing land cover condition. Where basin-specific studies determine a stream channel to be unstable, even though the above criterion is met, the pre-developed condition assumption shall be the "historic" land cover condition, or a land cover condition commensurate with achieving a target flow regime identified by an approved basin study.

This standard requirement is waived for sites that will reliably infiltrate all the runoff from impervious surfaces and converted pervious surfaces.

Western Washington Alternative Requirement

An alternative requirement may be established through application of watershed-scale hydrological modeling and supporting field observations. Possible reasons for an alternative flow control requirement include:

- Establishment of a stream-specific threshold of significant bedload movement other than the assumed 50% of the 2-year peak flow;
- Zoning and Land Clearing Ordinance restrictions that, in combination with an alternative flow control standard, maintain or reduce the naturally occurring erosive forces on the stream channel; or

A duration control standard is not necessary for protection, maintenance, or restoration of designated beneficial uses or Clean Water Act compliance.

See Section 15.01.077 for details on how alternative flow control requirements may be established.

Additional Requirement

Flow Control BMPs shall be selected, designed, and maintained in accordance with Volume III of the Stormwater Management Manual for Western Washington (2005) or an approved equivalent.

Minimum Requirement #8: Wetlands Protection

Applicability

The requirements below apply only to projects whose stormwater discharges into a wetland, either directly or indirectly through a conveyance system. These requirements must be met in addition to meeting Minimum Requirement #6, Runoff Treatment.

Thresholds

The thresholds identified in Minimum Requirement #6 – Runoff Treatment, and Minimum Requirement #7 – Flow Control shall also be applied for discharges to wetlands.

Standard Requirement

Discharges to wetlands shall maintain the hydrologic conditions, hydrophytic vegetation, and substrate characteristics necessary to support existing and designated uses. The hydrologic analysis shall use the existing land cover condition to determine the existing hydrologic conditions unless directed otherwise by a regulatory agency with jurisdiction. A wetland can be considered for hydrologic modification and/or stormwater treatment in accordance with Guide Sheet 1B in Appendix I-D on the Stormwater Management Manual for Western Washington (2005).

Additional Requirements

Stormwater treatment and flow control facilities shall not be built within a natural vegetated buffer, except for:

- necessary conveyance systems as approved by the City of Monroe; or
- as allowed in wetlands approved for hydrologic modification and/or treatment in accordance with Guidesheet 1B in Appendix I-D of the Stormwater Management Manual for Western Washington (2005).

An adopted and implemented basin plan prepared in accordance with the provisions of Section 15.01.077 may be used to develop requirements for wetlands that are tailored to a specific basin.

Minimum Requirement #9: Operation and Maintenance

An operation and maintenance manual that is consistent with the provisions in Volume V of the Stormwater Management Manual for Western Washington(2005) must be submitted for approval for all proposed stormwater facilities and BMPs. The party (or parties) responsible for maintenance and operation shall be identified in the operation and maintenance manual. For private facilities, a copy of the manual shall be retained onsite or within reasonable access to the site, and shall be transferred with the property to the new owner. For public facilities, a copy of the manual shall be retained in the appropriate department. A log of maintenance activity that indicates what actions were taken shall be kept and be available for inspection by the local government.

15.01.050 Construction Stormwater Pollution Prevention Plan (SWPPP) Elements

The construction site operator shall include each of the twelve elements below in the SWPPP and ensure that they are implemented unless site conditions render the element unnecessary and the exemption from that element is clearly justified in the SWPPP. The SWPPP shall include both narrative and drawings. All BMPs shall be clearly referenced in the narrative and marked on the drawings. The SWPPP narrative shall include documentation to explain and justify the pollution prevention decisions made for the project.

1. Preserve Vegetation/Mark Clearing Limits:

- a. Prior to beginning land disturbing activities, including clearing and grading, clearly mark all clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area.
 - b. The duff layer, native top soil, and natural vegetation shall be retained in an undisturbed state to the maximum degree practicable.
- 2. Establish Construction Access:
 - a. Construction vehicle access and exit shall be limited to one route, if possible.
 - b. Access points shall be stabilized with quarry spalls, crushed rock or other equivalent BMP to minimize the tracking of sediment onto public roads.
 - c. Wheel wash or tire baths shall be located on site, if the stabilized constructions entrance is not effective in preventing sediment from being tracked onto public roads.
 - d. If sediment is tracked off site, roads shall be cleaned thoroughly at the end of each day, or more frequently during wet weather. Sediment shall be removed from roads by shoveling or pickup sweeping and shall be transported to a controlled sediment disposal area.
 - e. Street washing is allowed only after sediment is removed in accordance with 2.d, above. Street wash wastewater shall be controlled by pumping back onsite or otherwise be prevented from discharging into systems tributary to waters of the state.
- 3. Control Flow Rates:
 - a. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the velocity and peak volumetric flow rate of stormwater runoff from the project site.
 - b. Where necessary to comply with 3.a, above, stormwater retention or detention facilities shall be constructed as one of the first steps in grading. Detention facilities shall be functional prior to construction of site improvements (e.g., impervious surfaces).
 - c. If permanent infiltration ponds are used for flow control during construction, these facilities should be protected from siltation during the construction phase.
- 4. Install Sediment Controls:
 - a. Stormwater runoff from disturbed areas shall pass through a sediment pond, or other appropriate sediment removal BMP, prior to leaving a construction site or prior to discharge to an infiltration facility. Runoff from fully stabilized areas may be discharged without a sediment removal BMP, but shall meet the flow control performance standard of 3.a, above.
 - b. Sediment control BMPs (sediment ponds, traps, filters, etc.) shall be constructed as one of the first steps in grading. These BMPs shall be functional before other land disturbing activities take place.
 - c. BMPs intended to trap sediment on site shall be located in a manner to avoid interference with the movement of juvenile salmonids attempting to enter off-channel areas or drainages.
- 5. Stabilize Soils:
 - a. Exposed and unworked soils shall be stabilized by application of effective BMPs that prevent erosion.
 - b. No soils should remain exposed and unworked for more than the time periods set forth below to prevent erosion:
 - i. During the dry season (May 1 – September 30): 7 days
 - ii. During the wet season (October 1 – April 30): 2 days
 - c. The time period may be adjusted by the City of Monroe, if the Applicant can show that local precipitation data justify a different standard.
 - d. Soils shall be stabilized at the end of the shift before a holiday or weekend if needed based on the weather forecast.
 - e. Soil stockpiles must be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways and drainage channels.
- 6. Protect Slopes:
 - a. Design and construct cut and fill slopes in a manner that will minimize erosion.

- b. Off-site stormwater (run-on) or groundwater shall be diverted away from slopes and undisturbed areas with interceptor dikes, pipes and/or swales. Offsite stormwater should be managed separately from stormwater generated on the site.
 - c. At the top of slopes, collect drainage in pipe slope drains or protected channels to prevent erosion. Temporary pipe slope drains shall handle the expected peak 10-minute flow velocity from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as "landscaped area."
 - d. Excavated material shall be placed on the uphill side of trenches, consistent with safety and space considerations.
 - e. Check dams shall be placed at regular intervals within constructed channels that are cut down a slope.
- 7. Protect Drain Inlets:
 - a. Storm drain inlets made operable during construction shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.
 - b. Inlet protection devices shall be cleaned or removed and replaced when sediment has filled one-third of the available storage (unless a different standard is specified by the product manufacturer).
- 8. Stabilize Channels and Outlets:
 - a. All temporary on-site conveyance channels shall be designed, constructed, and stabilized to prevent erosion from the following expected peak flows. Channels shall handle the expected peak 10-minute flow velocity from a Type 1A, 10-year, 24-hour frequency storm for the developed condition. Alternatively, the 10-year, 1-hour flow rate predicted by an approved continuous runoff model, increased by a factor of 1.6, may be used. The hydrologic analysis shall use the existing land cover condition for predicting flow rates from tributary areas outside the project limits. For tributary areas on the project site, the analysis shall use the temporary or permanent project land cover condition, whichever will produce the highest flow rates. If using the Western Washington Hydrology Model to predict flows, bare soil areas should be modeled as "landscaped area."
 - b. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches shall be provided at the outlets of all conveyance systems.
- 9. Control Pollutants:
 - a. All pollutants, including waste materials and demolition debris, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater.
 - b. Cover, containment, and protection from vandalism shall be provided for all chemicals, liquid products, petroleum products, and other materials that have the potential to pose a threat to human health or the environment. On-site fueling tanks shall include secondary containment.
 - c. Maintenance, fueling and repair of heavy equipment and vehicles shall be conducted using spill prevention and control measures. Contaminated surfaces shall be cleaned immediately following any spill incident.
 - d. Wheel wash or tire bath wastewater shall be discharged to a separate on-site treatment system or to the sanitary sewer with local sewer district approval.
 - e. Application of fertilizers and pesticides shall be conducted in a manner and at application rates that will not result in loss of chemical to stormwater runoff. Manufacturers' label requirements for application rates and procedures shall be followed.
 - f. BMPs shall be used to prevent or treat contamination of stormwater runoff by pH modifying sources. These sources include, but are not limited to: bulk cement, cement kiln dust, fly ash, new concrete washing and curing waters, waste streams generated

from concrete grinding and sawing, exposed aggregate processes, dewatering concrete vaults, concrete pumping and mixer washout waters. Construction site operators shall adjust the pH of stormwater if necessary to prevent violations of water quality standards.

- g. Construction site operators shall obtain written approval from the Department of Ecology prior to using chemical treatment other than CO₂ or dry ice to adjust pH.

10. Control De-Watering:

- a. Foundation, vault, and trench de-watering water, which have similar characteristics to stormwater runoff at the site, shall be discharged into a controlled conveyance system prior to discharge to a sediment trap or sediment pond.
- b. Clean, non-turbid de-watering water, such as well-point ground water, can be discharged to systems tributary to, or directly into surface waters of the state, as specified in 8, above, provided the de-watering flow does not cause erosion or flooding of receiving waters. Clean de-watering water should not be routed through stormwater sediment ponds.
- c. Other de-watering disposal options may include: (i) infiltration; (ii) transport offsite in vehicle, such as a vacuum flush truck, for legal disposal in a manner that does not pollute state waters; (iii) on-site chemical treatment or other suitable treatment technologies approved by the City of Monroe; (iv) sanitary sewer discharge with local sewer district approval, if there is no other option; or (v) use of a sedimentation bag with outfall to a ditch or swale for small volumes of localized de-watering.
- d. Highly turbid or contaminated dewatering water shall be handled separately from stormwater.

11. Maintain BMPs:

- a. All temporary and permanent erosion and sediment control BMPs shall be inspected, maintained and repaired as needed to assure continued performance of their intended function in accordance with BMP specifications.
- b. All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed.

12. Manage the Project:

- a. Development projects shall be phased to the maximum degree practicable and shall take into account seasonal work limitations.
- b. Construction site operators must maintain, and repair as needed, all sediment and erosion control BMPs to assure continued performance of their intended function.
- c. Construction site operators must periodically inspect their sites. For projects that disturb one or more acres, site inspections shall be conducted by a Certified Erosion and Sediment Control Lead who shall be identified in the SWPPP and shall be present on-site or on-call at all times.
- d. Construction site operators must maintain, update and implement their SWPPP. Construction site operators shall modify their SWPPP whenever there is a change in design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.

15.01.055 Erosivity Waiver

Construction site operators may apply for a waiver from the requirement to submit a SWPPP for review and approval by the City provided the following conditions are met:

- 1. The site will result in the disturbance of less than 5 acres; and the site is not a portion of a common plan of development or sale that will disturb 5 acres or greater; and
- 2. The project's rainfall erosivity factor ("R" Factor) is less than 5 during the period of construction activity, as calculated using the Texas A&M University online rainfall erosivity calculator at: <http://ei.tamu.edu/>. The period of construction activity begins at initial earth disturbance and ends with final stabilization; and
- 3. The entire period of construction activity falls between June 15 and September 15; and
- 4. The site or facility has not been declared a significant contributor of pollutants; and
- 5. There are no planned construction activities at the site that will result in nonstormwater discharges; and

6. The construction site operator shall notify the City of Monroe of the intention to apply this waiver at least one week prior to commencing land disturbing activities. The notification must include a summary of the project information used in calculating the project's rainfall erosivity factor (see #2 above) and a certified statement that:
 - a. The operator will comply with applicable local stormwater requirements; and
 - b. The operator will implement appropriate erosion and sediment control BMPs to prevent violations of water quality standards.

15.01.65. Adjustments

Adjustments to the Minimum Requirements may be granted provided that a written finding of fact is prepared, that addresses the following:

- The adjustment provides substantially equivalent environmental protection.
- Based on sound Engineering practices, the objectives of safety, function, environmental protection and facility maintenance, are met.

15.01.77. Basin/Watershed Planning

Basin/Watershed planning may be used to tailor Minimum Requirement #6 Runoff Treatment, Minimum Requirement #7 Flow Control, and/or Minimum Requirement #8 Wetlands Protection. Basin planning may be used to support alternative treatment, flow control, and/or wetland protection requirements to those contained in Section 15.01.045. Basin planning may also be used to demonstrate an equivalent level of treatment, flow control, and/or wetland protection through the construction and use of regional stormwater facilities.

Basin planning provides a mechanism by which the minimum requirements and implementing BMP's can be evaluated and refined based on an analysis of a basin or watershed. Basin plans are may be used to develop control strategies to address impacts from future development and to correct specific problems whose sources are known or suspected. Basin plans can be effective at addressing both long-term cumulative impacts of pollutant loads and short-term acute impacts of pollutant concentrations, as well as hydrologic impacts to streams, wetlands, and ground water resources.

Basin planning will require the use of computer models and field work to verify and support the models. The USGS has developed software called "GenScn" (Generation and Analysis of Model Simulation Scenarios) that can facilitate basin planning. The program is a Windows-based application of HSPF that predicts water quality and quantity changes for multiple scenarios of land use and water management within a basin. Applicants who are considering the use of basin/watershed plans to modify or tailor one or more of the minimum requirements are encouraged to contact Ecology early in the planning stage.

Some examples of how Basin Planning can alter the minimum requirements are given in Appendix I-A from the Stormwater Management Manual for Western Washington (2005).

In order for a basin plan to serve as a means of modifying the minimum requirements the following conditions must be met:

The plan must be formally adopted by all jurisdictions with responsibilities under the plan; and

- All ordinances or regulations called for by the plan must be in effect; and
- The basin plan must be reviewed and approved by Ecology.

~~15.01.070 Approval standards.~~

~~A.—Small Parcel Minimum Requirements. The following new development shall be required to control erosion and sediment during construction, to permanently stabilize soil exposed during construction, and to comply with Small Parcel Requirements No. 1 through No. 5 below:~~

~~Individual, detached, single-family residences and duplexes.~~

~~Creation or addition of less than five thousand square feet of impervious surface area.~~

~~Land disturbing activities of less than one acre.~~

~~Compliance shall be demonstrated through the implementation of an approved small parcel erosion and sediment control plan.~~

~~1.—Small Parcel Requirement No. 1, Construction Access Route. Construction vehicle access shall be, whenever possible, limited to one route. Access points shall be stabilized with quarry spall or crushed rock to minimize the tracking of sediment onto public roads.~~

~~2.—Small Parcel Requirement No. 2, Stabilization of Denuded Areas — Soil Stabilization. All exposed soils shall be stabilized by suitable application of BMPs, including but not limited to sod or other vegetation, plastic covering, mulching, or application of ground base on areas to be paved. All BMPs shall be selected, designed and maintained in accordance with an approved manual. From October 1st through April 30th, no soils shall remain exposed for more than two days. From May 1st through September 30th, no soils shall remain exposed for more than seven days.~~

~~3.—Small Parcel Requirement No. 3, Protection of Adjacent Properties. Adjacent properties shall be protected from sediment deposition by appropriate use of vegetative buffer strips, sediment barriers or filters, dikes or mulching, or by a combination of these measures and other appropriate BMPs.~~

~~4.—Small Parcel Requirement No. 4, Maintenance. All erosion and sediment control BMPs shall be regularly inspected and maintained to ensure continued performance of their intended function.~~

~~5.—Small Parcel Requirement No. 5, Other BMPs. As required by the local plan approval authority, other appropriate BMPs to mitigate the effects of increased runoff shall be applied.~~

~~B.—Large Development Minimum Requirements.~~

~~New development:~~

~~All new development that includes the creation or addition of five thousand square feet, or greater, of new impervious surface area, and/or land disturbing activity of one acre or greater,~~

~~shall comply with Minimum Requirements Nos. 1 through 11 in subsections (B)(1) through (B)(11) of this section.~~

~~Compliance shall be demonstrated through the implementation of an approved storm water site plan consisting of a large parcel ESC plan and a PSQC plan, as appropriate.~~

~~All new development that includes the creation or addition of five thousand square feet, or greater, of new impervious surface area, and land disturbing activity of less than one acre, shall comply with minimum requirements found in subsection (A) of this section.~~

~~Compliance shall be demonstrated through the implementation of an approved storm water site plan that includes a small parcel erosion and sediment control plan and a PSQC plan.~~

~~This section does not apply to the construction of individual, detached, single-family residences and duplexes. Those types of new development are included in the small parcel minimum requirements.~~

Redevelopment:

~~Where redevelopment of greater than or equal to five thousand square feet occurs:~~

~~New development Minimum Requirements Nos. 1 through 11 in subsection (B) of this section shall apply to that portion of the site that is being redeveloped, and source control BMPs shall be applied to the entire site, including adjoining parcels if they are part of the project.~~

~~In addition to the above requirements, where one or more of the following conditions apply, a storm water management plan shall be prepared that includes a schedule for implementing the minimum requirements to the maximum extent practicable for the entire site, including adjoining parcels if they are part of the project. An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop redevelopment requirements that are tailored to a specific basin.~~

~~1. Existing sites greater than one acre in size with fifty percent or more impervious surface.~~

~~2. Sites that discharge to a receiving water that has a documented water quality problem. Subject to local priorities, a documented water quality problem includes, but is not limited to, water bodies:~~

~~a. Listed in reports required under Section 305(b) of the Clean Water Act, and designated as not supporting beneficial uses;~~

~~b. Listed under Sections 304(l)(1)(A)(i), 304(l)(1)(A)(ii), or 304(l)(1)(B) of the Clean Water Act as not expected to meet water quality standards or water quality goals;~~

~~c.—Listed in Washington State's Nonpoint Source Assessment required under Section 319(a) of the Clean Water Act that without additional action to control nonpoint sources of pollution cannot reasonably be expected to attain or maintain water quality standards.~~

~~3.—Sites where the need for additional storm water control measures have been identified through a basin plan, the watershed ranking process under Chapter 400-12 WAC, or through Growth Management Act planning.~~

~~4.—Minimum Requirement No. 1, Erosion and Sediment Control. All new development and redevelopment that includes land disturbing activities of greater than or equal to one acre shall comply with Erosion and Sediment Control Requirements Nos. 1 through 14 below. Compliance with the erosion and sediment control requirements shall be demonstrated through implementation of an approved large parcel erosion and sediment control plan.~~

~~All new development and redevelopment that includes land disturbing activities of less than one acre shall comply with the small parcel minimum requirements found in MMC 15.01.070(A). Compliance with the small parcel requirements shall be demonstrated through implementation of a small parcel erosion and sediment control plan.~~

~~The following erosion and sediment control requirements shall be met:~~

~~a.—Erosion and Sediment Control Requirement No. 1, Stabilization and Sediment Trapping. All exposed and unworked soils shall be stabilized by suitable application of BMPs. From October 1st to April 30th, no soils shall remain unstabilized for more than two days. From May 1st to September 30th, no soils shall remain unstabilized for more than seven days. Prior to leaving the site, storm water runoff shall pass through a sediment pond or sediment trap, or other appropriate BMPs.~~

~~b.—Erosion and Sediment Control Requirement No. 2, Delineate Clearing and Easement Limits. In the field, mark clearing limits and/or any easements, setbacks, sensitive/critical areas and their buffers, trees and drainage courses.~~

~~c.—Erosion and Sediment Control Requirement No. 3, Protection of Adjacent Properties. Properties adjacent to the project site shall be protected from sediment deposition.~~

~~d.—Erosion and Sediment Control Requirement No. 4, Timing and Stabilization of Sediment Trapping Measures. Sediment ponds and traps, perimeter dikes, sediment barriers, and other BMPs intended to trap sediment on-site shall be constructed as a first step in grading. These BMPs shall be functional before land disturbing activities take place.~~

~~Earthen structures such as dams, dikes, and diversions shall be seeded and mulched according to the timing indicated in Erosion and Sediment Control Requirement No. 1.~~

~~e.—Erosion and Sediment Control Requirement No. 5, Cut and Fill Slopes. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. In addition, slopes shall be stabilized in accordance with Erosion and Sediment Control Requirement No. 1.~~

~~f.—Erosion and Sediment Control Requirement No. 6, Controlling Off-Site Erosion. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the volume, velocity, and peak flow rate of storm water runoff from the project site.~~

~~g.—Erosion and Sediment Control Requirement No. 7, Stabilization of Temporary Conveyance Channels and Outlets. All temporary on-site conveyance channels shall be designed, constructed and stabilized to prevent erosion from the expected velocity of flow from a two-year, twenty-four-hour frequency storm for the developed condition. Stabilization adequate to prevent erosion of outlets, adjacent stream banks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.~~

~~h.—Erosion and Sediment Control Requirement No. 8, Storm Drain Inlet Protection. All storm drain inlets made operable during construction shall be protected so that storm water runoff shall not enter the conveyance system without first being filtered or otherwise treated to remove sediment.~~

~~i.—Erosion and Sediment Control Requirement No. 9, Underground Utility Construction. The construction of underground utility lines shall be subject to the following criteria:~~

~~i.—Where feasible, no more than five hundred feet of trench shall be opened at one time.~~

~~ii.—Where consistent with safety and space considerations, excavated material shall be placed on the uphill side of trenches.~~

~~iii.—Trench dewatering devices shall discharge into a sediment trap or sediment pond.~~

~~j.—Erosion and Sediment Control Requirement No. 10, Construction Access Routes. Wherever construction vehicle access routes intersect paved roads, provisions must be made to minimize the transport of sediment (mud) onto the paved road. If sediment is transported onto a road surface, the roads shall be cleaned thoroughly at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a controlled sediment disposal area.~~

~~Street washing shall be allowed only after sediment is removed in this manner.~~

~~k.—Erosion and Sediment Control Requirement No. 11, Removal of Temporary BMPs. All temporary erosion and sediment control BMPs shall be removed within thirty days after final site stabilization is achieved or after the temporary BMPs are no longer needed.~~

~~Trapped sediment shall be removed or stabilized on-site.~~

~~Disturbed soil areas resulting from removal shall be permanently stabilized.~~

~~l.—Erosion and Sediment Control Requirement No. 12, Dewatering Construction Sites. Dewatering devices shall discharge into a sediment trap or sediment pond.~~

~~m.—Erosion and Sediment Control Requirement No. 13, Control of Pollutants Other than Sediment on Construction Sites. All pollutants other than sediment that occur on-site during construction shall be handled and disposed of in a manner that does not cause contamination of storm water.~~

~~n.—Erosion and Sediment Control Requirement No. 14, Maintenance. All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair shall be conducted in accordance with an approved manual.~~

~~o.—Erosion and Sediment Control Requirement No. 15, Financial Liability. Performance bonding, or other appropriate financial instruments, shall be required for all projects to ensure compliance with the approved erosion and sediment control plan.~~

~~5.—Minimum Requirement No. 2, Preservation of Natural Drainage Systems. Natural drainage patterns shall be maintained, and discharges from the site shall occur at the natural location, to the maximum extent practicable.~~

~~6.—Minimum Requirement No. 3, Source Control of Pollution. Source control BMPs shall be applied to all projects to the maximum extent practicable. Source control BMPs shall be selected, designed, and maintained according to an approved manual. An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop source control requirements that are tailored to a specific basin; however, in all circumstances, source control BMPs shall be required for all sites.~~

~~7.—Minimum Requirement No. 4, Runoff Treatment BMPs. All projects shall provide treatment of storm water. Treatment BMPs shall be sized to capture and treat the water quality design storm, defined as the six-month, twenty-four-hour return period storm. The first priority for treatment shall be to infiltrate as much as possible of the water quality design storm, only if site conditions are appropriate and groundwater quality will not be impaired. Direct discharge of untreated storm water to groundwater is prohibited. All treatment BMPs shall be selected, designed, and maintained according to an approved manual.~~

~~Storm water treatment BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the director. An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop runoff treatment requirements that are tailored to a specific basin.~~

~~8.—Minimum Requirement No. 5, Stream-Bank Erosion Control. The requirement below applies only to situations where storm water runoff is discharged directly or indirectly to a stream, and must be met in addition to meeting the requirements in Minimum Requirement No. 4, Runoff Treatment BMPs:~~

~~Storm water discharges to streams shall control stream bank erosion by limiting the peak rate of runoff from individual development sites to fifty percent of the existing condition two-year, twenty-four-hour design storm while maintaining the existing condition peak runoff rate for the ten-year, twenty-four-hour and one-hundred-year, twenty-four-hour design storms. As the first priority, stream-bank erosion control BMPs shall utilize infiltration to the fullest extent practicable, only if site conditions are appropriate and groundwater quality is protected. Stream bank erosion control BMPs shall be selected, designed, and maintained according to an approved manual.~~

~~Storm water treatment BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the director.~~

~~An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop stream bank erosion control requirements that are tailored to a specific basin.~~

~~9.—Minimum Requirement No. 6, Wetlands. The requirements below apply only to situations where storm water discharges directly or indirectly through a conveyance system into a wetland and must be met in addition to meeting the requirements in Minimum Standard No. 4, Runoff Treatment BMPs:~~

~~a.—Storm water discharges to wetlands must be controlled and treated to the extent necessary to meet the ground water quality standards, Chapter 173-200 WAC, or state water quality standards, Chapter 173-201 WAC, as appropriate.~~

~~b.—Discharges to wetlands shall maintain the hydro-period and flows of existing site conditions to the extent necessary to protect the characteristic uses of the wetland. Prior to discharging to a wetland, alternative discharge locations shall be evaluated, and natural water storage and infiltration opportunities outside the wetland shall be maximized.~~

~~c.—Created wetlands that are intended to mitigate for loss of wetland acreage, function and value shall not be designed to also treat storm water.~~

~~d.—In order for constructed wetlands to be considered treatment systems, they must be constructed on sites that are not wetlands and they must be managed for storm water treatment. If these systems are not managed and maintained in accordance with an approved manual for a period exceeding three years, these systems may no longer be considered constructed wetlands. Discharges from constructed wetlands to waters of the state (including discharges to natural wetlands) are regulated under Chapter 90.48 RCW and Chapters 173-200 and 173-201 WAC.~~

~~e.—Storm water treatment BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the director. An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop requirements for wetlands that are tailored to a specific basin.~~

~~10.— Minimum Requirement No. 7, Water Quality Sensitive Areas. Where the director determines that the minimum requirements do not provide adequate protection of water quality sensitive areas, either on-site or within the basin, more stringent controls shall be required to protect water quality.~~

~~Storm water treatment BMPs shall not be built within a natural vegetated buffer, except for necessary conveyance systems as approved by the director. An adopted and implemented basin plan (Minimum Requirement No. 9) may be used to develop requirements for water quality sensitive areas that are tailored to a specific basin.~~

~~11.— Minimum Requirement No. 8, Off-Site Analysis and Mitigation. All development projects shall conduct an analysis of off-site water quality impacts resulting from the project and shall mitigate these impacts. The analysis shall extend a minimum of one-fourth of a mile downstream from the project. The existing or potential impacts to be evaluated and mitigated shall include, at a minimum, but not be limited to:~~

~~a.— Excessive sedimentation;~~

~~b.— Stream bank erosion;~~

~~c.— Discharges to groundwater contributing or recharge zones;~~

~~d.— Violations of water quality standards;~~

~~e.— Spills and discharges of priority pollutants;~~

~~f.— Capacity of the existing storm water management infrastructure.~~

~~12.— Minimum Requirement No. 9, Basin Planning. Adopted and implemented watershed-based basin plans may be used to modify any or all of the Minimum Requirements; provided, that the level of protection for surface or groundwater achieved by the basin plan will equal or exceed that which would be achieved by the minimum requirements in the absence of a basin plan. Basin plans shall evaluate and include, as necessary, retrofitting of BMPs for existing development and/or redevelopment in order to achieve watershed-wide pollutant reduction goals. Standards developed from basin plans shall not modify any of the above requirements until the basin plan is formally adopted and fully implemented by local government. Basin plans shall be developed according to an approved manual.~~

~~13.— Minimum Requirement No. 10, Operation and Maintenance. An operation and maintenance schedule shall be provided for all proposed storm water facilities and BMPs, and the party (or parties) responsible for maintenance and operation shall be identified.~~

~~14.— Minimum Requirement No. 11, Financial Liability. Performance bonding or other appropriate financial instruments shall be required for all projects to ensure compliance with these standards.~~

~~C.— Exceptions. Exceptions to Minimum Requirements No. 1 through No. 11 may be granted prior to permit approval and construction. An exception may be granted following a public hearing; provided, that a written finding of fact is prepared that addresses the following:~~

~~1.— The exception provides equivalent environmental protection and is in the overriding public interest and that the objective of safety, function, environmental protection and facility maintenance, based upon sound engineering, are fully met;~~

~~2.— That there are special physical circumstances or conditions affecting the property such that the strict application of these provisions would deprive the applicant of all reasonable use of the parcel of land in question, and every effort to find creative ways to meet the intent of the minimum standards has been made;~~

~~3.— That the granting of the exception will not be detrimental to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and~~

~~4.— The exception is the least possible exception that could be granted to comply with the intent of the minimum requirements. (Ord. 1032, 1994)~~

15.01.080 Administration.

A. ~~A.~~—Director. The city of Monroe city engineer shall administer this chapter and shall be referred to as the director. The director shall have the authority to develop and implement administrative procedures to administer and enforce this chapter.

B. ~~B.~~—Review and Approval. All activities regulated by this chapter shall be reviewed and approved by the director prior to beginning any work. The director may approve, conditionally approve or deny an application for activities regulated by this chapter.

C. ~~C.~~—Enforcement Authority. The director shall enforce this chapter.

D. ~~D.~~—Inspection. All activities regulated by this chapter, except those exempt in MMC [15.01.050](#)(B), shall be inspected by the director. The director shall inspect projects at various stages of the work requiring approval to determine that adequate control is being exercised. Stages of work requiring inspection include, but are not limited to, preconstruction, installation of BMPs, land disturbing activities, installation of utilities, landscaping, retaining walls

and completion of project. When required by the director, a special inspection and/or testing shall be performed.

~~E. E.~~ Fees. Fees for plan review and inspection of activities regulated in this chapter shall be as set by periodic resolution of the city council. (~~Ord. 1260, 2002; Ord. 1133, 1998; Ord. 1032, 1994~~)

15.01.090 Enforcement.

~~A. A.~~ Compliance with the requirements of this code shall be mandatory. The general penalties and remedies established in Chapter 1.04 MMC for such violations shall apply to any violation of this chapter.

~~B. B.~~ Stop Work Order. The director shall have the authority to serve a person a stop work order if an action is being undertaken in violation of this chapter. If a portion of a project is in violation of this chapter, the director may issue a stop work order for the entire project.

~~1.~~ Content of Order. The order shall contain:

~~1.~~

~~a. A description of the specific nature, extent, and time of violation and the damage or potential damage; and~~

~~b. A notice that the violation or the potential violation cease and desist and, in appropriate cases, the specific corrective action to be taken within a given time.~~

~~2. Notice. A stop work order shall be imposed by a notice in writing, either by certified mail with return receipt requested or by personal service, to the person incurring the same, or by posting at the project site.~~

~~3. Effective Date. The stop work order issued under this section shall become effective immediately upon receipt by the person to whom the order is directed or upon posting the project site.~~

~~4. Compliance. Failure to comply with the terms of a stop work order shall result in enforcement actions including, but not limited to, the issuance of a civil penalty~~

~~a. A description of the specific nature, extent, and time of violation and the damage or potential damage; and~~

~~b. A notice that the violation or the potential violation cease and desist and, in appropriate cases, the specific corrective action to be taken within a given time.~~

~~2. Notice. A stop work order shall be imposed by a notice in writing, either by certified mail with return receipt requested or by personal service, to the person incurring the same, or by posting at the project site.~~

~~3. Effective Date. The stop work order issued under this section shall become effective immediately upon receipt by the person to whom the order is directed or upon posting the project site.~~

~~4. Compliance. Failure to comply with the terms of a stop work order shall result in enforcement actions including, but not limited to, the issuance of a civil penalty.~~

~~C. C.~~ Notice and Order of Code Violation and Civil Penalty. When the director determines that a violation has occurred or is occurring, the director, or designee, may issue a notice and order of code violation to the person responsible for the violation in conformance with the enforcement procedures of Chapter 1.04 MMC. The notice and order may be combined with the stop work order identified in subsection (B) of this section. (~~Ord. 033/2008 § 4; Ord. 003/2008 (Exh. B); Ord. 1032, 1994~~)

15.01.100 Exceptions.

~~A. Board of Appeals. After a public hearing, the hearing examiner may grant an exception from the requirements of this chapter. In granting any exception, the hearing examiner may prescribe conditions that are deemed necessary or desirable for the public interest.~~

- ~~— B. Findings of Fact. Exceptions to Minimum Requirements No. 1 through No. 11 may be granted prior to permit approval and construction. An exception may be granted following a public hearing; provided, that a written finding of fact is prepared that addresses the following:
 - ~~— 1. The exception provides equivalent environmental protection and is in the overriding public interest; and that the objectives of safety, function, environmental protection and facility maintenance, based upon sound engineering, are fully met;~~
 - ~~— 2. That there are special physical circumstances or conditions affecting the property such that the strict application of these provisions would deprive the applicant of all reasonable use of the parcel of land in question, and every effort to find creative ways to meet the intent of the minimum standards has been made;~~
 - ~~— 3. That the granting of the exception will not be detrimental to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and~~
 - ~~— 4. The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.~~~~
- ~~— C. Prior Approval. Any exception shall be approved prior to approval and construction.~~
- ~~— D. Duration of Exception. Exceptions granted shall be valid for two years, unless granted for a shorter period.~~

~~E. Right of Appeal. All actions of the hearing examiner shall be final and conclusive, unless the original applicant or an adverse party appeals the hearing examiner's decision to the city council per Chapter 21.60 MMC. After a public hearing, the hearing examiner may grant exceptions/variances (exceptions) to the Minimum Requirements. In granting any exceptions/variances, the hearing examiner may prescribe conditions that are deemed necessary or desirable for the public interest.~~

Project-specific design exceptions based on site-specific conditions do not require prior approval of the Department of Ecology.

The Hearing Examiner may grant an exception to the minimum requirements if such application imposes a severe and unexpected economic hardship. To determine whether the application imposes a severe and unexpected economic hardship on the project applicant, the Hearing Examiner must consider and document with written findings of fact the following:

- The current (pre-project) use of the site, and
- How the application of the minimum requirement(s) restricts the proposed use of the site compared to the restrictions that existed prior to the adoption of the minimum requirements; and
- The possible remaining uses of the site if the exception were not granted; and
- The uses of the site that would have been allowed prior to the adoption of the minimum requirements; and
- A comparison of the estimated amount and percentage of value loss as a result of the minimum requirements versus the estimated amount and percentage of value loss as a result of requirements that existed prior to adoption of the minimum requirements; and
- The feasibility for the owner to alter the project to apply the minimum requirements.

In addition any exception must meet the following criteria:

- The exception will not increase risk to the public health and welfare, nor injurious to other properties in the vicinity and/or downstream, and to the quality of waters of the state; and
- The exception is the least possible exception that could be granted to comply with the intent of the Minimum Requirements.

Prior Approval. Any exception shall be approved prior to approval and construction.

Duration of Exception. Exceptions granted shall be valid for two years, unless granted for a shorter period.

Right of Appeal. All actions of the hearing examiner shall be final and conclusive, unless the original applicant or an adverse party appeals the hearing examiner's decision to the city council per Chapter 21.60 MMC. (Ord. 003/2008 (Exh. B); Ord. 1032, 1994)

15.01.110 Severability.

If any provision of this chapter or its application to any person, entity, or circumstance is held invalid, the remainder of this chapter or the application of the provision to other persons, entities, or circumstances shall not be affected. (~~Ord. 1032, 1994~~)